Machine learning query optimization changes this by learning from actual query performance and iterating on the suggestion it makes for which path the query should take. In this way, it mimics neural network patterns to learn from experience. Machine learning is an important component of the growing field of data science. Through the use of statistical methods, algorithms are trained to make classifications or predictions, and to uncover key insights in data mining projects. These insights subsequently drive decision making within applications and businesses, ideally impacting key growth metrics. As big data continues to expand and grow, the market demand for data scientists will increase. They will be required to help identify the most relevant business questions and the data to answer them.